TORREYA

February, 1915.

Vol. 15 No. 2

NOTES ON PLANTS OF THE CHICAGO REGION

By E. J. Hill

However long one may have botanized in a given locality, or carefully gone over the ground, new plants will be met with from time to time. Some are migrants, and a strange plant is likely to greet the collector by railroad or wayside or in patches of waste ground at any time. The majority of these in inland regions are beside railroads, migration being favored by slow advance along the right of way or by seed dropped from cars loaded with grain or stock. Others native to the section may be of very limited range, closely restricted in that region to some particular locality and for this reason they may have been overlooked. One may have gone all around that special place many times, or been almost in contact with the plant, but not being exactly there has failed to see it. Such plants seem almost like newcomers. It may be that some of them are, since they are within the bounds of their general geographic range, but more or less local in habitat. Others can be credited to the recent marked development in the segregation of species, either in the making of new ones or, by more careful monographing, the separation of those that have been confused. The herbarium of many years' standing, as well as the open field, will become ground for exploration in this respect. Hence we are not likely soon to fail in work along systematic and taxonomic lines, and though the problem of new species may be overweighted, some, perhaps many, will doubtless stand, and clearer views will be obtained of all.

Among genera recently monographed that of *Panicum* by

[No. 1, Vol. 15, of Torreya, comprising pp. 1–20, was issued 25 January 1915.]

Hitchcock and Chase has contributed a goodly number, much in excess of what were named in the older Manuals. As given in that work thirty-three species and one variety, *P. Huachucae* Ashe var. *silvicola* Hitch. & Chase, have been detected in the region around the head of Lake Michigan. This is a crescent-shaped area, forty-five to fifty miles wide in its widest part, the horns becoming thinner and approaching the lake on the east side at Grand Beach, Michigan, and on the west side at Zion City, Illinois, near the Wisconsin boundary. I shall not enumerate the majority of the species, since a reference to that work will give the required information, but give only a few of the more interesting from a distributional point of view. Some have been added since that work appeared and do not find a place on their maps of distribution. All but two of the above number likewise appear in the basin of the Glacial Lake Chicago, or the area once covered by the expansion of the present Lake Michigan when its waters drained southward into the Mississippi. One of these is *P. linearifolium* Scribn., found at Wheaton, Ill. The other, *P. Leibergii* (Vasey) Scribn., is treated as an exception, since I do not know of its growing in the area at present. In June, 1880, I found it in the sandy ground beside the Rock Island Railroad at Englewood, now within the limits of Chicago. The station was destroyed long since, and its presence there may have been due to introduction, since its present place of growth in our region is in a dry field bordering the railroad just east of Joliet. I was not able to identify it with any form given in the Manuals at that time, and it remained long in the herbarium without a trivial name. On the appearance of Britton & Brown's Illustrated Flora, in 1898, I found in the appendix to the third volume a description and figure which answered the purpose, and the name was applied. This was not my earliest collection of this grass. An examination of my herbarium showed specimens of *P. Leibergii*, but under another name, taken in meadows about five miles south of Preston, Minn., in June, 1869, and in June, 1870, in copses at Waldron, Kankakee County, Ill.

Those added or not given for this region in the work of Hitchcock and Chase are *P. Ashei* Pearson, *P. microcarpon* Muhl. and

P. Auburne Ashe, the two former at Grand Beach in the extreme southwest corner of Michigan, and the last at Dune Park, Ind. *Panicum microcarpon*, found in 1913, grew in deeply shaded rather wet woods by State Line Creek, and appears to be unrecorded for the flora of Michigan. The time being early September the stems were much branched, weak and prostrate. *P. Auburne*, found also in 1913, is set off from others with which it was associated by its gray look, due to its silky hairs and velvety pubescence. It grew in the sands of oak and pine woods which characterize the dunes. This species, as well as *P. Albemarlense* Ashe, and *P. verrucosum* Muhl., both likewise of the dune region, are of especial interest as representatives of the Atlantic coast flora far removed from their general range.

Panicum clandestinum L. is somewhat peculiar in its range in the region as far as I can learn. It occurs in Indiana just south of Michigan City, and again north of that place by State Line Creek, a stream draining the ground that skirts the outer side of the sand hills by Lake Michigan, and breaking through them enters it at Grand Beach. In the bottomlands of this creek it forms dense patches with stems 4 to 5 feet high. It follows down the creek and is common along its banks at Grand Beach.

Sporobolus brevifolius (Nutt.) Scribn. I first obtained this in 1906 from dry hills of Joliet gravel a little west of Joliet. It is a representative of a flora whose range is north and west of this region. It grows in dense tufts like a bunch grass. In 1912 I came across it again a few miles west of this station by the banks of the DuPage River. It was in a shallow soil covering the limestone rocks that border the river. The layer of earth was so thin that the roots and stolons passed through it and adhered to the rock. This adhesion was so strong that efforts to pull up the stems commonly resulted in breaking the culms instead of detaching them from the rock, so that a knife was used to cut away the sod.

Poa debilis Torr. Although I found this as long ago as 1890, in the sandy woods at Casello, now within the limits of Indiana Harbor, Ind., it does not seem to have been reported for this region. I had not seen it since within our bounds till the summer

of 1913 in the dry oak woods at Glencoe, Ill., only a few rods from the shore of Lake Michigan, the station at Casello being but little farther from the shore. In 1906 I came upon some on the wooded bank of Fish Creek, near Dillman, Wis., a short distance north of Milwaukee. This station also was close by the lake. The collections were all made in the month of June. No mention is made of this species for Illinois in Patterson's Catalogue of the plants of the state published in 1876. For Indiana it is given in Stanley Coulter's Catalogue (1901) for Tippecanoe county, about 100 miles south of Lake Michigan, and for Steuben county at the northeast corner of the state.

Agropyron Richardsonii Schrad. In 1881 specimens of an *Agropyron* were obtained in open sandy woods by Lake George, near Whitin, Ind. They were referred at the time to *A. violaceum* Lange, and listed under that name in Higley & Raddin's Flora of Cook County, Illinois and part of Lake County, Indiana, Having found the true *A. violaceum* at Ha! Ha! Bay, Quebec. in 1888, it became evident that the Indiana plant was something different. But what to call it was not at once apparent. In 1902 while collecting plants at Dune Park in company with Mrs. Agnes Chase we came upon an *Agropyron* with rather prominent awns growing in somewhat open woods of sand hills. On comparison with the descriptions in Britton's Manual and in Scribner's American Grasses, the Dune Park grass was decided to be *A. Richardsonii*. This also covered the case of the Whiting plant. From all indications in both of these stations the evidence was that they were not introduced, but indigenous plants. The station near Whiting was long since destroyed, like many another of our interesting or rare plants, by the encroachments of industrial works.

Agropyron Smithii Rydb. Patches of this were found in 1910 in a deep cut of the Rock Island railroad in the morain hills west of Mokena, Ill. It was evidently of comparatively recent introduction since up to 1902, while making botanical investigations, I had frequently been in the locality, and occasionally for about four years afterwards, and had not seen it. The dense patches were made very conspicuous by their glaucous green color.

Carex seorsa E. C. Howe. On May 30, 1903, a Carex was discovered in a swamp at Dune Park, which I was unable to identify with any given in our handbooks. Having a copy of M. L. Fernald's Northeastern *Carices* of the Section *Hyparrhenae*, published in the Proceedings of the American Academy of Arts and Sciences, Vol. 38, No. 17, it was traced to this species. Having received by the Gray Herbarium, soon after this time, a set of the Plantae Exsiccatae Grayanae, sheet No. 50 of which is an example of this species collected at Canton, Mass., a direct comparison was made. It is doubtless rare in this region as I have seen it in this locality only.

Carex scirpoides Schkuhr. var. *capillacea* (Bailey) Fernald, a closely related species, grows in the same swamp. This was submitted for identification to C. F. Wheeler who named it *C. interior capillacea* Bailey. The latter has much narrower more or less involute leaves, almost setaceous sometimes toward the ends, and the perigynia broadest at the base. Both grow in mats but the weak stems of the latter soon fall over and lie almost flat on the ground. The swamp where these species were collected is mainly one of *Betula lutea* and *Pinus Strobus*, with abundant shrubs of *Rhus vernix* and *Vaccinium corymbosum* around whose bases are dense beds of *Sphagnum*. Of the two *Carex seorsa* appears to be earlier in fruiting, as its perigynia on May 30, 1903, are in about the same stage of advancement as those of the variety of *C. scirpoides* collected July 4, 1906. Some but not all of those of *C. seorsa* are as far advanced in a collection made May 2, 1908.

Œnothera speciosa Nutt. This was obtained in the same railway cut as *Agropyron Smithii*, July 4, 1910. It grew upon the sides of the cut from close beside the roadbed up to the margin of the pasture above, since it readily spreads in the gravelly bank. Though of low growth its large white flowers make it very showy as well as ornamental. Mr. James H. Ferris, of Joliet, well known for his interest in ferns, had taken some plants from the locality and had a fine bed of them growing in his garden. He first called my attention to the plant at this place, which must have come in later than 1902–1904.

Gaura coccinea Pursh. A bed of this was found in June, 1910, beside the track of the Michigan Central Railroad at Crisman, Porter County, Ind. Being near the station and much exposed it soon after disappeared or was destroyed. But it showed its ability to migrate eastward from its native region in the distant west, and will doubtless become established in places where not molested. It was in full flower June 13, when discovered, the rather dense bed well covered with rose colored and scarlet flowers.

Gaura parviflora Dougl. Found in dry open oak woodlands bordering Long Run Creek, town of Lockport, Ill. While visiting this locality in August, 1912, to get specimens of *Fontinalis Umbachii* Card., which grows abundantly in this part of the creek, Mr. W. N. Clute, who was in company with me, brought from the neighboring woods some plants of a *Gaura* that differed from *G. biennis* L., the common one here, calling attention to this difference, We concluded it was *G. parviflora*. In visiting the spot I found *G. biennis* associated with *G. parviflora*, both showing their characteristic features. The station being farther east than the range usually assigned to the species, apparently unrecorded heretofore for the region, the question at once arose whether it was introduced. But this seemed hardly compatible with the location, since it was fully a mile from the nearest railroad and a quarter of a mile from any public highway. All indications pointed to the fact that it was as much at home and indigenous as its companion, *G. biennis*. Some of the plants were very stout, the stems at the base about an inch in diameter and correspondingly tall. The range commonly assigned is west of the Mississippi.

Chicago, Ill.